

SIMATIC S7-300

Connection methods

Fully modular connection

Overview



The fully modular connection is the standard connection for the SIMATIC S7-300/400. The fully modular connection facilitates convenient, fast, and correct connection of the I/O to the SIMATIC S7-300/400.

- Easy plugging in of front connector module, connecting cable and connection module
- Fast and low-cost wiring
- Supply voltage connectable to front connector module or connection module for digital and analog signals
- Reduction in wiring errors, clear control cabinet wiring
- Distribution of digital signals by byte or by double-byte
- Each component can be replaced individually.
- Every cable length can be configured without cutting, or pre-assembled cables can be used

Connecting cables



The connection cable is the linking element between the front connector module and the connection module. It transmits 8 signals and the supply voltage. The maximum bridgeable distance is 30 m. The connecting cable is available in two different versions:

- The pre-assembled round cable
- The round-sheath ribbon cable assembled by the user

Basic modules



In the case of the basic module, the connection modules are used with basic functionality. Here, the I/O signal is connected quickly and simply from the field to the module or from the module to the field.

The connection terminals for the I/O signals are designed as screw terminals or spring terminals. The connection modules are available for digital and analog signals.

Signal modules



In the case of the signal module, the digital connection modules with LED are used. The yellow LEDs indicate the "active high" signal of the individual channels. This makes commissioning easier for you, and you always have an overview of the signal states of your I/O. At the same time, a green LED indicates when the 24 V DC is applied.

The connection terminals for the I/O signals are designed as screw terminals or spring terminals. The connection modules are available for digital signals.

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Ordering data conn. cables	Order No.
Pre-assembled round cable	
<u>16-pole, 0.14 mm²</u>	
unshielded	
• 0.5 m	6ES7 923-0BA50-0CB0
• 1.0 m	6ES7 923-0BB00-0CB0
• 1.5 m	6ES7 923-0BB50-0CB0
• 2.0 m	6ES7 923-0BC00-0CB0
• 2.5 m	6ES7 923-0BC50-0CB0
• 3.0 m	6ES7 923-0BD00-0CB0
• 4.0 m	6ES7 923-0BE00-0CB0
• 5.0 m	6ES7 923-0BF00-0CB0
shielded	
• 1.0 m	6ES7 923-0BB00-0DB0
• 2.0 m	6ES7 923-0BC00-0DB0
• 2.5 m	6ES7 923-0BC50-0DB0
• 3.0 m	6ES7 923-0BD00-0DB0
• 4.0 m	6ES7 923-0BE00-0DB0
• 5.0 m	6ES7 923-0BF00-0DB0
Round-sheath ribbon cable	
<u>16-pole, 0.14 mm²</u>	
unshielded	
• 30 m	6ES7 923-0CD00-0AA0
• 60 m	A) 6ES7 923-0CG00-0AA0
shielded	
• 30 m	6ES7 923-0CD00-0BA0
• 60 m	6ES7 923-0CG00-0BA0
Round-sheath ribbon cable	
<u>2 x 16-pole, 0.14 mm²</u>	
unshielded	
• 30 m	6ES7 923-2CD00-0AA0
• 60 m	6ES7 923-2CG00-0AA0
8 connectors (16-pole)	6ES7 921-3BE10-0AA0
Insulation displacement system with 8 cable grips	
Accessories	
Crimping tool	6ES7 928-0AA00-0AA0
For processing the connectors (female ribbon cable connector)	

Ordering data basic modules	Order No.
Connection module TP1	
for 1-wire initiators	
Packaging unit (1 unit)	
• Spring terminals	6ES7 924-0AA10-0AB0
• Screw terminals	6ES7 924-0AA10-0AA0
Connection module TP3	
for 3-wire initiators	
Packaging unit (1 unit)	
• Spring terminals	6ES7 924-0CA10-0AB0
• Screw terminals	6ES7 924-0CA10-0AA0
Connection module TPK	
for 2 x 8 signals	
Packaging unit (1 unit)	
• Spring terminals	6ES7 924-1AA10-0AB0
• Screw terminals	6ES7 924-1AA10-0AA0
Connection module TP2	
for 2 A modules	
for 2-wire initiators	
Packaging unit (1 unit)	
• Spring terminals	6ES7 924-0BB10-0AB0
• Screw terminals	6ES7 924-0BB10-0AA0
Connection module TPA	
for analog signals	
Packaging unit (1 unit)	
• Spring terminals	6ES7 924-0CC10-0AB0
• Screw terminals	6ES7 924-0CC10-0AA0
Accessories	
Labeling plates	
for connection modules	
Insertable labeling plate PU = 200 units	6ES7 928-2AB00-0AA0
Self-adhesive labeling plate PU = 200 units	6ES7 928-2BB00-0AA0
Shield plate	6ES7 928-1BA00-0AA0
for analog connection module (4 units)	
Shield connection terminal	
for shield plate, 2 units, with cable diameter	
• 2 to 6 mm (2 cables)	6ES7 390-5AB00-0AA0
• 3 to 8 mm	6ES7 390-5BA00-0AA0
• 4 to 13 mm	6ES7 390-5CA00-0AA0

A) Subject to export regulations: AL: N and ECCN: EAR99H